5. (Amended) A method as claimed in claim 1, wherein the thermograms are obtained with a temperature gradient ranging between 0.5 and 5°C/minute, preferably at 2°C/minute.

6. (Amended) A method as claimed in claim 1, wherein CH4 is used for said gas.

7. (Amended) A system for implementing the method as claimed in claim 1, characterized in that it comprises in combination : a calorimetric measuring device, means for placing the measuring cell of said device under pressure by means of a hydrocarbon gas, thermogram recording means.